Remarks:

Claims 1-9, 11-22, and 24-29 are pending in the application. In the Official action dated April 14, 2005, claim 1-9, 11-22, and 24-29 are rejected. New claim 36 is added, and claims 1, 15, and 19 are amended. In view of the above amendments and the following remarks, applicants respectfully request reconsideration of the rejected claims.

Rejections under 35 U.S.C. § 102

Claims 1-8, 12, and 14-18 are rejected under 35 U.S.C. § 102(e) as being anticipated by Park et al. (U.S. Patent No. 6,714,353). Applicants respectfully disagree, and suggest that, in view of the above amendments, the rejected claims are not anticipated by the Park et al. reference.

Particularly, independent claim 1 as amended recites a display device that includes "a static spectral separator configured to refractively separate multispectral light into a plurality of light bands". Independent claim 15 as amended recites a method that includes "providing a static spectral separator configured to refractively separate the light from the light source into a plurality of light bands".

The optical device of Park et al. does not refractively separate light into a plurality of light bands. Rather, the Park et al. device explicitly recites the use of dichroic filters to separate the light by selective reflection. See for example col. 5, line 59 to col. 6, line 6:

> "The first dichroic coating surface 56 reflects light having a desired wavelength band, for example, blue light, to be outputted to the external through a first output surface 53 and transmits the remaining red and green light to the second dichroic coating surface 58. The second dichroic coating surface 58 reflects light having a desired wavelength band, for example, the red light, of the red and green light transmitted through the first dichroic coating surface 56, to be outputted to the external through a second output surface 55 adjacent to the first output surface 53 and transmits the remaining green light to the total reflection coating surface 60. The total reflection coating surface 60 outputs the green light transmitted through the second dichroic

coating surface 58 to the external through a third output surface 57 adjacent to the second output surface."

As the Park et al. reference fails to disclose a device or method that refractively separates light into a plurality of light bands, applicants suggest that the reference fails to disclose each and every element of the rejected independent claims 1 and 15, and that the reference fails to anticipate the rejected claims. As claims 2-8, 12, 14, and 16-18 depend directly or indirectly from claims 1 and 15, applicants suggest these claims a similarly not anticipated by Park et al.

In view of the above amendments and remarks, applicants respectfully request the withdrawal of the rejection of claims 1-8, 12, and 14-18 under 35 U.S.C. § 102(e).

Rejections under 35 U.S.C. § 103

Claims 1-5,7-9, 11, 12, 14, 15, 17-20, 22, and 24-29 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Slobodin (U.S. Patent No. 6,334,685) in view of Hwang (U.S. Patent No. 6,588,906). In particular, the Examiner suggests that Slobodin teaches all of the elements of claim 1, excepting the use of a static spectral separator, but that one of ordinary skill would substitute the color light beam splitter unit of Hwang for the color wheel of Slobodin, in order to increase the quality of the projected image. Applicants respectfully disagree, and suggest that the examiner has failed to establish the *prima facie* obviousness of the rejected claims.

As discussed above, the device of amended claim 1, and the methods of amended claims 15 and 19 recite refractively separating light into a plurality of light bands. Applicants suggest that the video projector of Slobodin fails to include refractive separation of light into a plurality of light bands. In particular, as admitted in the Action itself "Slobodin makes use of a color wheel 22 for separating white light

into multispectral light". The rotating color wheels of Slobodin utilize color filters to perform spectral separation by selective transmission or reflection based upon wavelength.

Further, the Hwang image display apparatus utilizes a color light beam splitting unit that relies upon color filters to effect spectral separation. Particularly, as recited at col. 6, lines 1-5: "The color light beam splitting unit 70 includes a plurality of switchable color filters 71, 72, and 73 which selectively reflects and/or transmits a plurality of color light beams, for example, a red (R) light beam, a green (G) light beam, and a blue (B) light beam." The Hwang reference similarly fails to disclose refractively separating light into a plurality of light bands.

In the Office action dated January 21, 2005, the Examiner suggested that Slobodin, in fact, discloses a refractive spectral separator, because the color wheel of Slobodin includes an optically transparent material, and refraction is inherent in transparent materials. Applicants suggest that the claims do not recite mere incidental and inconsequential refraction at some point in a light path, but they recite refractively separating light into a plurality of light bands.

In the case of color wheel 130, cited by the Examiner, Slobodin recites at col. 6, lines 60-64 that "filter segments 90B, 90G, and 90R are formed on first surface 132, filter segments 92 B, 92G, and 92R (not shown) are formed on corresponding portions of second surface 134, and a mirror 136 forms a third surface 138". More particularly, that "filtered colors of polychromatic light 18 are reflected from first surface 132 at an obtuse angle, from second surface 134 at a right angle, and from third surface 138 at an acute angle, causing first, second, and third light beams 24, 26, and 28 to converge

and then diverge. As described with reference to Fig. 11, this arrangement also provides good color isolation" (at col. 6, line 65 to col. 7, line 4).

In order to establish *prima facie* obviousness, the cited references must teach or suggest each element of the rejected claims. Applicants' recitation that light is refractively separated into a plurality of light bands cannot be ignored, and is not properly parsed into distinct and isolated 'refraction' and 'separation' steps. Neither Slobodin nor Hwang teach or suggest the refractive separation of multi-spectral light into a plurality of separated light bands. Slobodin teaches the use of chromatic filters in combination with a color wheel, while Hwang teaches a plurality of switchable color filters. Neither reference teaches or suggests refractive color separation.

In view of the above amendments and remarks, applicants suggest the examiner has failed to establish the *prima facie* obviousness of claims 1-5,7-9, 11, 12, 14, 15, 17-20, 22, and 24-29, and that the rejection of the claims under 35 U.S.C. § 103(a) should be withdrawn.

New claim

Applicants take this opportunity to add new claim 36, that is directed to a display device that includes a spectral separator configured to refractively separate multispectral light into a plurality of light bands, and at least one homogenizing element configured to homogenize each separated light band. For at least the reasons provided above, applicants suggest the subject matter of claim 36 is allowable over the art of record.

Applicants believe that this application is now in condition for allowance, in view of the above amendments and remarks. Accordingly, applicants respectfully request that the Examiner issue a Notice of Allowability covering the pending claims. If the Examiner has any questions, or if a telephone interview would in any way advance prosecution of the application, please contact the undersigned attorney of record.

Respectfully submitted,

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CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this correspondence is being facsimile transmitted to Examiner M. Koval, Group Art Unit 2851, Commissioner for Patents, at facsimile number (703) 872-9306 on July 11, 2005.

Christie A. Doolittle